

# IDAHO DEPARTMENT OF FISH AND GAME

Jerry M. Conley, Director

EAGLE HATCHERY

Annual Report



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by

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## TABLE OF CONTENTS

	<u>Page</u>
ABSTRACT .....	1
OBJECTIVES .....	2
INTRODUCTION .....	2
FISH PRODUCTION .....	2
Kokanee Salmon .....	2
Brook Trout .....	2
Brown Trout .....	3
Cutthroat Trout .....	3
SPAWNTAKING OPERATIONS .....	3
FISH FEED USED .....	3
HATCHERY IMPROVEMENTS .....	3
HATCHERY NEEDS .....	4
ACKNOWLEDGEMENTS .....	4

## **EAGLE HATCHERY**

### **Annual Report**

#### **ABSTRACT**

This year, Eagle Hatchery was scheduled to raise approximately 500,000 kokanee, 100,000 brook trout, 100,000 brown trout and to hold Bear Lake cutthroat trout for future broodstock. The total weight of all fish produced was 9,126 pounds.

The kokanee egg take from Anderson Ranch Reservoir was 412,460.

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## **OBJECTIVES**

The objectives of Eagle Hatchery are:

1. To raise to fingerling size approximately 500,000 kokanee (early), 100,000 brook trout and 100,000 brown trout.
2. To stock these fish in lakes, streams and reservoirs throughout the state as needed.
3. To trap and spawn adult kokanee salmon from Anderson Ranch Reservoir.

## **INTRODUCTION**

Located 12 miles west of Boise, the Eagle Hatchery receives considerable visitor traffic and is, therefore, a major "contact point" between the public and the Department of Fish and Game. Visitor traffic remained at a relatively high level this year due in part to the proximity of Eagle Island State Park. Some remodeling of the visitor's center was done this year and includes a slide presentation and new name plates for the aquaria. The hatchery receives its water from seven artesian wells with a combined flow of 1.9 cfs. Water from all the wells is relatively low in dissolved oxygen and very high in dissolved nitrogen gas. The pond area is more than adequate, while water flow and quality are the major limiting factors to increased production.

## **FISH PRODUCTION**

### **Kokanee Salmon**

Kokanee salmon is the primary species reared at Eagle Hatchery. Production for the year totaled 491,090 fish weighing 4,620 lbs. This included 150,790 size #1 and 340,300 size #2 fish which were stocked into Anderson Ranch, Cascade and Lucky Peak reservoirs. The hatchery began the year with 823,000 eggs and received an additional 275,000 fry from the Grace Hatchery. Survival from green eggs to stocking was 44.7%, a considerable improvement from last years 29.7%. Success from green eggs to hatched fry was 80.3%. Most mortality was suffered in the Heath stacks and fry vats from nitrogen supersaturation and related problems.

### **Brook Trout**

Ford Hatchery in Washington state supplied us with 514,590 eyed brook trout eggs. Survival of these eggs to hatching was 78.9%; however, survival to planting as size #2 fish was only 19.6% or 100,860 fish weighing 1,580 lbs. The major cause of mortality was high nitrogen gas levels in the water supply resulting in losses after hatching. Additional losses were suffered through cannibalism, disease and bird predation.

## **Brown Trout**

Brown trout eggs numbering 350,000 were received from Plymouth Rock Trout Company, Plymouth, Massachusetts. Hatching success was very good at 93.2%, but survival to stocking. was very poor at only 23.1% of the hatched fish. The primary problem was nitrogen supersaturation. Size #1 fish stocked totaled 15,012, weighing 36 lbs., and size #2 fish planted were 60,542, weighing 950 lbs., for a grand total of 75,554 fish weighing 986 lbs.

## **Cutthroat Trout**

Bear Lake cutthroat trout were held at Eagle Hatchery with the original intention of keeping them on hand as future broodstock. As often happens, however, the plans changed and the fish were stocked out. Seven thousand, one hundred and thirty (7,130) catchable-size cutthroat, weighing 3,100 lbs., were stocked.

### **SPAWNTAKING OPERATIONS**

In sharp contrast to last years record spawning run, very few fish showed at the Anderson Ranch kokanee trap. The 582 females that were spawned yielded a total of 412,460 green eggs. The average number of eggs per female was 708 as compared to last years 886 eggs per female. The quality of the eggs also appeared to be down, with an eye-up of only 50.6% as compared to last years 91.2%.

### **FISH FEED USED**

In years past, both dry and OMP feeds were used at Eagle Hatchery. This year, however, only-dry feed was used. A total of 17,450 lbs. was fed with a cost of \$4,396.82. Cost of feed used per pound of fish produced was \$0.482.

### **HATCHERY IMPROVEMENTS**

The major cause of fish health problems at Eagle Hatchery is the poor water quality. This problem is most evident in the hatching house where it can cause excessive mortality of fry. In light of this, a pack column degasser, pump and power generator were installed on the hatch house water supply. A considerable improvement was noted, including a decrease in nitrogen gas and an increase in dissolved oxygen. This coming year will be the first full year of operation for this system. The only negative effect of the installation is an increase in the amount of sand entering the system.

The visitor's center received a new audio-visual display that was well received by hatchery visitors. New name plates were added to the aquaria to aid visitors in fish identification.

#### **HATCHERY NEEDS**

Improvements in water quality should be considered for all parts of the hatchery, especially the north raceways where nitrogen supersaturation is still a problem.

The septic systems are still in need of repair or replacement. Frequent cleaning and pumping of these systems are now required.

The domestic water systems leave much to be desired with low flow and low pressure (sometimes barely adequate for bathing).

A garage or other storage area is needed for the hatchery residence. The present structure is old, inadequate and located away from the houses.

#### **ACKNOWLEDGEMENTS**

Mel Sadecki, Fish Hatchery Superintendent I; Ken Taylor, Fish Transport Operator and Elaine Rippey, Laborer.